



THE MONTANA
ANALYSIS AND REPORTING SYSTEM
MARS



MARS Training


Sponsored by the Office of Public Instruction






OBJECTIVES


- You will be able to
 - Define and Describe the purpose, data, functions, and resources available on the MARS website
 - Access the MARS website
 - Filter, create, and export report data in the reports and interactive menus
 - Access supporting documents
 - Create and manage accounts using the account management menu
 - Understand how the data available on MARS can help you to plan for and impact instruction at the district, school, classroom, and student levels.






ANALYSIS AND REPORTING SYSTEM – WHAT IS MARS?

- Web-based reporting system
- Supports interactive disaggregation of CRT data
- Tabular and graphic displays of CRT results.
- Data can be exported as .XLS, .CSV, or PDF.
- Teachers can be assigned to student rosters so that they can access data for their students (only).
- Data in tables can be manipulated within the browser window without page reload.







ANALYSIS AND REPORTING SYSTEM – WHAT IS MARS?

- MARS is a secure site.
- System, school, and teacher accounts
 - System and school accounts-stay the same
 - Teacher accounts –reassigned every year
- Reading and Math results are available for Grades 3-8 and 10. Science results are available for Grades 4, 8, and 10.



4



ANALYSIS AND REPORTING SYSTEM – WHAT IS MARS?

- The Montana Criterion Referenced Test (CRT) compares a student against the Montana standards for the purpose of improvement in curriculum, instruction, and student learning.
- Content Tested
 - Reading and Math- Grades 3-8 and 10
 - Science-Grades 4, 8, 10
- Types of items on test:
 - Multiple choice – Reading, Math, and Science
 - Short answer – only Math
 - Constructed response – Reading, Math, and Science
- The CRT consists of common (scored) and embedded field test items.
 - Large pool of field test items
 - Field test items become common items in future tests
 - Only common items are used for scoring



5




TRANSITION TO THE MONTANA COMMON CORE STANDARDS (MCCS) – SBAC* ASSESSMENT

- 2011-12 through 2013-14 the MontCAS will:
 - Use the current standards and reporting system
 - Progressively align content with the Montana Common Core Standards
 - Implement test questions to align with the Montana Common Core Standards
 - Provide released field test items aligned to Montana Common Core Standards.
- Sample items can be found on the SBAC website at the following link:
 - [SBAC Assessment Sample Items](#)

* Smarter Balanced Assessment Consortium




6




ANALYSIS AND REPORTING SYSTEM
– WHAT IS MARS?

- The CRT Gives You Data For:
 - Individual Students
 - Class or Grade Level
 - Subgroups
 - School
 - District
 - State




7




ANALYSIS AND REPORTING SYSTEM –
CRT DATA ANALYSIS

- Look for trends, patterns, or clusters in the data.
- Analyze data from multiple choice & constructed response separately.
- Base decisions on more than one data point.
- Look at data for insight into:
 - Curriculum
 - Instruction
 - Student Achievement
- Share the data appropriately
 - Teachers
 - Parents
 - Students




8



ANALYSIS AND REPORTING SYSTEM –
CRT DATA ANALYSIS

- Analyze
 - Test Questions
 - Questions & answers related to each Montana standard
 - Correct answers vs. incorrect answers
 - Percentage of correct responses for each standard for multiple choice and constructed response
 - Subgroup statistics
 - Class or district performance vs. the state results
 - The process used by students to arrive at an incorrect response
 - Proficient student responses vs. non-proficient student responses



9



ANALYSIS AND REPORTING SYSTEM – CRT DATA ANALYSIS

- Multiple Choice Questions
- What MT Standard is being assessed?
- What do students need to know to answer the question?
- What strategies would they use to get the correct answer?
- What misconceptions or incorrect processes might lead to each incorrect response?
- What are the implications for instruction?



ANALYSIS AND REPORTING SYSTEM – CRT DATA ANALYSIS

- Constructed Response Questions
- What do students need to know to answer the question?
- What are the main requirements for a scale 4 answer?
- What would be needed to convert a scale 3 response to a scale 4 response?
- What are the implications for instruction?



ANALYSIS AND REPORTING SYSTEM – RELEASED ITEMS

- Scored items are released annually
 - A percentage of test items are released annually.
 - There is a Released Items tab within *MARS* that can be used to access the current year's released items.
- You can view multiple years of released items for each grade and subject on the OPI website at:
 - http://opi.mt.gov/Curriculum/MontCAS/index.html?gpm=1_5&ipm=5_2&ipm=4_3
- Click on the year you would like to view for:
 - Multiple choice, constructed response, and math short answer items
 - Math vocabulary, answer keys
 - Scoring rubrics, and examples of student work for constructed response items
 - 2012 is the first year that items coded to the MCCS have been made available.



ANALYSIS AND REPORTING SYSTEM – RELEASED ITEMS

Released Items (Cont.)

On the released items table of contents – please look at: CRT Math Vocabulary Lists for grades 3-8 & 10. The math vocabulary used on the test is listed in this file – you may want to make sure that these terms are included in math instruction.



NAVIGATING AND USING *MARS*



ANALYSIS AND REPORTING SYSTEM – ACCESSING MARS

- Access the Analysis and Reporting System via the Measured Progress Services website:
<http://services.measuredprogress.org>
- Select 'Montana' from the state/contract dropdown menu and select Enter.





ANALYSIS AND REPORTING SYSTEM – ACCESSING MARS

- Click on MARS to launch the login screen.




Montana
Online Services

- Montana CBT M (2008)
- Post Test Information
- CIT Alternate Student Registration
- MARS
- Forms and Manuals




16



ANALYSIS AND REPORTING SYSTEM – ACCESSING MARS


- System-level Test Coordinators and School Principals received their login account information from Measured Progress / OPI in May 2008.
- Enter the appropriate User Name and Password (system or school) then click on "Log In".




Montana Analysis and Reporting System

Login

1. Enter your user name in the box labeled **User Name**
2. Enter your password in the box labeled **Password**




17



ANALYSIS AND REPORTING SYSTEM – HOME PAGE

- After login, the Home page appears. School major (Principal)



Montana Analysis and Reporting System

Home | Reports | Interactive | Released Items | Account Management

Home

The Family Educational Rights and Privacy Act (FERPA) requires that access to individual student information be restricted to the extent that the user's access, and subsequent report generation, all responsibilities and privileges are appropriate for maintaining the privacy and security of all student records.

Webmaster: You are logged in as 00000000.


Download Location Review with Data, 2010 and Framework Report

Get information that you need and use the tool that you need to use to help you with the new system.


View Data, 2010

Download links for additional helpful information.

Help, 2010



18



ANALYSIS AND REPORTING SYSTEM – ACCESSING MARS


- At the school-level, there are only two account types:
 - Principal Account
 - Classroom Account (Teachers)
- Classroom accounts will be front-loaded by Measured Progress.
- Principals will have access to a report within MARS which will contain all Classroom Account login information.
 - This report contains information only if the "sort by" field in AIM was completed.
- Principals will be required to assign the Classroom Accounts to their corresponding student roster groups (Student Assignment)

Student Assignment


User:
Principals

Grade:
1

Assign





19



ANALYSIS AND REPORTING SYSTEM – ACCOUNT MANAGEMENT

- Account Management. Principals can create, delete, and activate accounts, as well as assign Classroom Accounts (teachers) to student rosters via Student Assignment.





20



ANALYSIS AND REPORTING SYSTEM – ACCOUNT MANAGEMENT

- Create User:
 - [Account Management / Create User](#)
 - Create User
 - Sign Up for your New Account

User Name:
Principals

Confirm Password:
Principals

☐ Test Name

☐ Grade 03 Mathematics

☐ Grade 03 Reading

☐ Grade 04 Mathematics

☐ Grade 04 Reading

☐ Grade 05 Science


☐ Grade 05 Mathematics

☐ Grade 05 Reading

Create User



21



ANALYSIS AND REPORTING SYSTEM –
ACCOUNT MANAGEMENT

Delete User:

Account Management/Active User


Delete User

User Name:

John


Delete User

Select the user you would like to delete from the dropdown menu then click on "Delete User".



UNIVERSITY OF NORTH DAKOTA
Office of Public Information
701.774.4100

22



ANALYSIS AND REPORTING SYSTEM –
ACCOUNT MANAGEMENT

Set Active Users:

Account Management/Set Active Users

Item Name

ALL

ALL A

ALL B

ALL C

ALL D

ALL E

ALL F

ALL G

ALL H

ALL I

ALL J

ALL K

ALL L

ALL M

ALL N

ALL O

ALL P

ALL Q

ALL R

ALL S

ALL T

ALL U

ALL V

ALL W

ALL X

ALL Y

ALL Z

ALL

Student Assignment:

Student Assignment

Item Name

ALL

ALL A

ALL B

ALL C

ALL D

ALL E

ALL F

ALL G

ALL H

ALL I

ALL J

ALL K

ALL L

ALL M

ALL N

ALL O

ALL P

ALL Q

ALL R

ALL S

ALL T

ALL U

ALL V

ALL W


ALL X

ALL Y

ALL Z

ALL

23



ANALYSIS AND REPORTING SYSTEM –
INTERACTIVE

The Interactive Menu

Rooster

Performance Level Summary

Item Analysis

Longitudinal Data

Home

Reports

Interactive


Released Items

Account Management

Performance Level Summary


Item Analysis

Longitudinal Data





UNIVERSITY OF NORTH DAKOTA
Office of Public Information
701.774.4100

24





ANALYSIS AND REPORTING SYSTEM – INTERACTIVE

- Roster
 - Choose values for: Year, System, Test (Grade and Subject), Administration, and School where needed.
 - Select the Group to Filter By (usually School-level); Data will automatically display.
 - Advanced Filtering Options can be selected to further refine data.
 - Use **Show**  **Hide**  options to expand or contract the menu.

Windows



1. Select the School Admin Name in the **Basic Filtering Options** section to select the school for data report.

2. Select the **Advanced Filtering Options** to choose additional sections to filter.

Basic Filtering Options  

Year: System: Test:


Administration: School: District:

Advanced Filtering Options  


Report Data

Filter by Group:

Unselected






















































































25



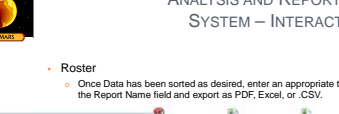
ANALYSIS AND REPORTING SYSTEM – INTERACTIVE

- Roster
 - Items within the Roster can be sorted within the table without having to refresh the window.
 - Sort by: Released Item, Standard, Correct Response, Points Possible, Last Name, First Name, Student ID, Scaled Score, or Performance Level.

Export PDF File                                                                                   


ANALYSIS AND REPORTING SYSTEM – INTERACTIVE

- **Router**
 - Once Data has been sorted as desired, enter an appropriate title in the Report Name field and export as PDF, Excel, or CSV.



The screenshot displays the 'Analysis and Reporting System' interface. At the top, there is a 'Data' table with two columns: 'Year' and 'Value'. The table contains data for years 1 through 14. Below the table, there are four export buttons: 'Export as PDF Format', 'Export in XLS Format', 'Export as CSV Format', and 'Export the Layout'. A 'Report Name' field is located above the export buttons. Below the export buttons, there is a 'View Item' section with a table of links for different years (1 to 14). The first link is highlighted in blue.


20



MATHS

ANALYSIS AND REPORTING SYSTEM – INTERACTIVE

Roster and Item-level Report, exported as PDF.



Confidential
Roster and Item-level Report
Mathematics

System: **Maths Schools**


School: **10000000**

Grade: **KS**

Date: **6/12/2011** Page 1 of 3

	Subject Tests												Key Skill Tests												Total	Average	Standard Deviation
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
Overall Test Scores																											
100% correct																									0	0	0
90% correct																									0	0	0
80% correct																									0	0	0
70% correct																									0	0	0
60% correct																									0	0	0
50% correct																									0	0	0
40% correct																									0	0	0
30% correct																									0	0	0
20% correct																									0	0	0
10% correct																									0	0	0
0% correct																									0	0	0
Item-level Test Scores																											
100% correct																									0	0	0
90% correct																									0	0	0
80% correct																									0	0	0
70% correct																									0	0	0
60% correct																									0	0	0
50% correct																									0	0	0
40% correct																									0	0	0
30% correct																									0	0	0
20% correct																									0	0	0
10% correct																									0	0	0
0% correct																									0	0	0


20




MINISTRY OF EDUCATION
GOVERNMENT OF KARNATAKA

ANALYSIS AND REPORTING SYSTEM – INTERACTIVE

- Performance Level Summary
 - From the Interactive dropdown, select Performance Level Summary
 - Enter values in Basic Filtering Options. Choose a Filter by Group. Data will automatically display.
 - Advanced Filtering Options can be selected to further refine data.

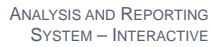


Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary
Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary
Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary
Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary
Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary	Performance Level Summary



MINISTRY OF EDUCATION
GOVERNMENT OF KARNATAKA

30



- From the Interactive dropdown, select Item Analysis
- Enter values in Basic Filtering Options. Choose a Filter by Group. Data will automatically refresh and display as values are changed.
- Advanced Filtering Options can be selected to further refine data.
- Multiple Choice and Constructed Response results are displayed separately. For Multiple Choice, Count and Percent values can be selected.



University of North Carolina
Office of Public Engagement
Social Sciences, State Government




- Items within the Item Analysis can be sorted within the table without having to refresh the window.
- Sort by: Released Item, Standard, Correct (#), A(#), B(#), C(#), D(#), IR, or Correct Response. It will sort smallest to greatest.



University of Public Health
Buenos Aires, Argentina



Ontario
Ministry of Education




ANALYSIS AND REPORTING
SYSTEM – INTERACTIVE

- Longitudinal Data
 - From the Interactive dropdown, select Longitudinal Data.
 - Enter values in Basic Filtering Options and select a grade.
 - Select a student from the list.
 - All subject results display with up to four years worth of data.

Longitudinal Data

Year to ENROL: Report in PDF format

Year	Standard Results	School	Administrative	Test Name	Current Resp	Score	Performance Level
2016	30	West	West of US	Grade 10 Mathematics	NA	232	Meeting Proficiency
2016	30	West	West of US	Grade 10 Reading	NA	255	Proficient
2016	30	West	West of US	Grade 10 Mathematics	NA	200	Proficient
2016	30	West	West of US	Grade 10 Reading	NA	235	Proficient
2016	30	West	West of US	Grade 10 Science	NA	239	Proficient
2016	30	West	West of US	Grade 10 Mathematics	NA	200	Advanced
2016	30	West	West of US	Grade 10 Reading	NA	250	Advanced



34



ANALYSIS AND REPORTING
SYSTEM – REPORTS

- Reports
 - From the main menu at the top of the screen, select Reports

Reports

1. Use the dropdown menus in the Basic Filtering Options section to select the criteria for your report.
2. Use the Download icon to select the reports that you would like to download from the Reports system.
3. Many reports downloaded from this site are compressed (zip) and saved in Portable Document Format (pdf). You will need a decompression utility and a PDF reader to open reports.
4. When saving files, please be sure to save them to a secure location on your network.


- Select Basic Filtering Options.

Basic Filtering Options

Year: System: Grade:



35



ANALYSIS AND REPORTING
SYSTEM – REPORTS

- Once Basic Filtering Options have been selected:
 - Select Reports you would like to download.
 - Select Download.
 - Save report(s) to computer. As with other reports, it will be compressed.

Reports

Report Name


☐ School Summary - Mathematics

☐ School Summary - Reading

☐ School Summary - Science

Download

- The number of students on your summary reports may not match the number of students on your roster. Students who were not enrolled the entire year are not included on your summary reports, but are included on the roster.



36



ANALYSIS AND REPORTING SYSTEM – CONFIDENTIALITY

- Extremely Important!
- The information on MARS is confidential and must be protected from viewing by unauthorized individuals.
 - Never leave your browser open to MARS when you are not directly working with the program.
 - Always completely close your browser and clear the history when you are done on your school computer or especially on any other computer.
 - Also, please remember if you export data or copy & paste data from MARS treat it with confidentiality.



CRT PERFORMANCE LEVEL DESCRIPTORS AND SCALED SCORE RANGES (SAMPLES)

Grade 3

Performance Level	Reading	Mathematics
Advanced	317-360	219-360
Proficient	259-294	219-289
Emerging Proficiency	227-249	227-249
Novice	200-224	200-224

Grade 5

Performance Level	Reading	Mathematics
Advanced	251-300	209-300
Proficient	209-236	209-288
Emerging Proficiency	225-249	225-249
Novice	200-224	200-224

Grade 7

Performance Level	Reading	Mathematics
Advanced	268-346	269-310
Proficient	250-297	250-288
Emerging Proficiency	227-249	227-249
Novice	200-224	200-224

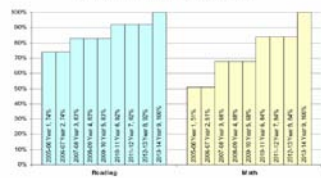
Grade 10

Performance Level	Reading	Mathematics	Science
Advanced	289-309	241-300	209-306
Proficient	250-288	229-288	229-266
Emerging Proficiency	225-249	225-249	225-249
Novice	200-224	200-224	200-224



TIMELINE FOR IMPROVEMENT

Montana Annual Measurable Objective Trajectory





OTHER SUPPLEMENTARY MATERIAL

- Montana Content Standards, Benchmarks, and Performance Descriptors
- Essential Learning Expectations
- <http://www.opi.mt.gov/Curriculum/CSI/index.html>



MARS HELP

- 2008 MARS User and Training Guide:
http://opi.mt.gov/Curriculum/MontCAS/index.html?pm=1_5&ipm=5_4&ipm=8_2
 - Go to the OPI Assessment page
 - Click on the tab for CRT & ALT
 - Click on the tab for TEST RESULTS
- Technical Support is available at the following:
 - E-Mail: MarsHelp@measuredprogress.org
 - Phone: (866) 632-7764



OPI CONTACT INFORMATION

- **Judy Snow**
 - State Assessment Director
 - 406-444-3656
 - jsnow@mt.gov
- **Yvonne Field**
 - Assessment Specialist
 - 406-444-0748
 - yfield@mt.gov
- **Ashley Makowski**
 - Assessment Administrative Specialist
 - 406-444-3511
 - amakowski@mt.gov
